



Attorney Docket No. 1998/F-101 US [9931\*13; formerly (8577\*26)]  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	)	
	)	
Dirk VANDERZANDE et al.	)	
	)	
Serial No.: 09/786,581	)	Group Art Unit: 1626
	)	
§ 371 Date: 9 August 2001	)	Examiner: Deborah C. Lambkin
	)	
For: PROCESS FOR THE PREPARATION OF	)	
DERIVATIVES OF 4-ALKYLSULFINYL-	)	
METHYLARYLENEMETHANOL	)	

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO OFFICE ACTION**

In response to the Office Action dated 02 September 2005, Applicants make the following Response.

**I. RESTRICTION REQUIREMENT**

In the Office Action dated 02 September 2005, the Examiner contends that the above-captioned patent application contains twenty-four separate inventions. The identities of the alleged twenty-four separate inventions is set forth in the 02 September 2005 Office Action as Groups I through XXIV and will not be restated in this Paper.

The Examiner has requested the election of single invention to which the claims must be restricted. In compliance with 37 CFR § 1.143, Applicants provisionally elect *with traverse*

Group XI with the proviso that within this provisionally-elected group, R<sup>4</sup> and R<sup>5</sup> themselves do not contain a heteroatom, but they do form a ring with S.

Applicants respectfully traverse the Examiner's restriction requirement on the grounds that the alleged twenty-four separate inventions are not separate inventions. Instead, the application is directed to a single invention and, therefore, the claims are sufficiently related under Patent Cooperation Treaty (PCT) Rule 13.

Initially, the Examiner is not applying the proper standard in making the present restriction requirement. This application is a national stage filing pursuant to 35 U.S.C. § 371. Therefore the applicable standard is unity of invention under PCT Rule 13.1 and 13.2. Pursuant to PCT Rule 13.1, an application shall relate to one invention, or a group of inventions "so linked as to form a single general inventive concept." (*See* PCT Rule 13.1, MPEP § 1850 at 1800-93 (8th ed., Rev. 3, Aug. 2005)). This is the "requirement of unity of invention." PCT Rule 13.2 states that the requirement of unity is fulfilled "only when there is a technical relationship among those inventions involving one or more of the same or corresponding technical features." (*See* PCT Rule 13.2, MPEP § 1850 at 1800-93). "Special technical features" means those features that "define a contribution which each of the claimed inventions, *considered as a whole*, makes over the prior art." (*Id.*) (emphasis added). Applicants traverse the election requirement on the grounds that the requirement does not consider the claimed invention as a whole, and that when considered as a whole, the claims have unity of invention.

The present restriction requirement is flawed because the Examiner has not considered that the claimed process and compounds that share a common technical relationship -- a novel reaction sequence providing asymmetrically substituted aromatic groups when starting from a symmetrically-substituted aromatic groups. The reaction sequence is common for all of the

The invention is not directed to a specific combination of groups and substituents as the Examiner contends. By defining the alleged twenty-four separate inventions based on the identity of Ar, R<sup>3</sup>, R<sup>4</sup>, and R<sup>5</sup>, the Examiner has not, as explicitly required by PCT Rule 13, considered the invention as a whole. For this reason alone the election requirement is unfounded and should be withdrawn.

$$\begin{array}{c} \text{R}^4 \quad \text{X}^- \\ \diagdown \quad / \\ \text{S}^+ \\ / \quad \diagdown \\ \text{R}^5 \end{array} - \text{CH}_2 - \text{Ar} - \text{CH}_2 - \begin{array}{c} \text{X}^- \quad \text{R}^4 \\ / \quad \diagdown \\ \text{S}^+ \\ \diagup \quad \diagdown \\ \text{R}^5 \end{array} \quad (\text{IV})$$

[Serial No.: 09/786,581]

Regarding the Examiner's contention that the Markush group alternatives fail to meet either the B(1) or B(2) requirements in MPEP § 1850, Applicants respectfully traverse the Examiner's contention. Initially, as stated above, the respective Markush group alternatives for Ar, R<sup>3</sup>, R<sup>4</sup>, and R<sup>5</sup> all share a common element -- they all share in being part of the reaction sequence that is either claimed or is the process to make the claimed compounds.

Contrary to the Examiner's contention, each of the variables Ar, R<sup>3</sup>, R<sup>4</sup>, and R<sup>5</sup> have common significant structural elements and/or are recognized as a general class of chemical compounds. The Examiner's groupings are not based on fundamental differences between the Markush group alternatives for Ar, R<sup>3</sup>, R<sup>4</sup>, and R<sup>5</sup>. Rather, these groupings are drawn along minor differences among the members of well-known general classes of compounds.

In fact, close examination of Groups I through XXIV reveal that many of these Groups differ in trivial ways such as the identity of the heteroatom(s). For example, Groups III, IV, and V only differ in the identity of the optional heteroatom. In Group III, R<sup>3</sup> is defined as having an optional heteroatoms O. In Group IV, the optional heteroatom is S. Group V has N. Another example is Groups VI, VII, and VIII. In Group VI, R<sup>3</sup> is defined as having an optional heteroatoms O and S. In Group VII, the heteroatoms are O and N. In Group VIII, the heteroatoms are S and N. Group IX has O, S, and N.

The heteroatoms O, S, and N are a well-known and long-established general class of chemical compounds. The Applicants cannot reasonably be expected to divide the invention among the members of such a well-known general class of compounds.

Finally, Applicants note that during the PCT phase of this application, there was no issue regarding an alleged lack of unity.

In sum, when considered as a whole, the alleged twenty-four separate inventions share a single general inventive concept with the one another -- a novel reaction sequence providing asymmetrically substituted aromatic groups when starting from a symmetrically-substituted aromatic groups. For all these reasons, the claims have unity of invention as required by PCT Rules 13.1 and 13.2 and should be examined in a single application.

## **II. ELECTION REQUIREMENT**

The Examiner also requested to elect a single disclosed species that falls within one of the alleged twenty-four separate inventions for examination purposes only. In response, Applicants provisionally elect with traverse for examination purposes only the compounds and processes wherein Ar is phenyl substituted or unsubstituted, R<sup>3</sup> does not optionally contain a heteroatom, and R<sup>4</sup> and R<sup>5</sup> form a ring.

### III. REPLACEMENT SPECIFICATION

Regarding the Examiner's statement that the Specification is missing from this application, Applicants enclose a replacement Specification as originally filed.

Together with this Paper, Applicants submit a request for a three-month extension of time for response and instructions to withdraw the associated fee from Deposit Account No. 03-2775. Should the Examiner find a fee or extension of time for response, not otherwise accounted for, is necessary for entry and consideration of this paper, Applicants respectfully request such an extension of time be granted and the Commissioner is authorized to charge any fee to Deposit Account No. 03-2775.

Respectfully submitted,  
CONNOLLY BOVE LODGE & HUTZ LLP

Dated: 30 December 2005

By: 

Daniel G. Mulveny  
Reg. No. 45,897

Enclosure: Replacement Original Specification  
431143\_1.DOC